

ABSTRACT

Ground contact portions 10 are classified into a tree structure such that each of the ground contact portions 10 of a mobile body 1 (mobile robot) equipped with three or more ground contact portions 10 becomes a leaf node and that an intermediate node exists between the leaf node and a root node having all the leaf nodes as its descendant nodes. On each node (a C-th node) having child nodes, the correction amounts of the desired relative heights of the ground contact portions 10 of the C-th node are determined such that the relative relationship among the actual node floor reaction forces of the child nodes of the C-th node approximates the relative relationship among the desired node floor reaction forces of the child nodes of the C-th node, and joints of the mobile body 1 are operated so that a desired relative height obtained by combining the correction amounts is satisfied.